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Total Number of Pages in This Submission

Application Number	10/728,932
Filing Date	December 8, 2003
First Named Inventor	Toshimitsu KONUMA
Group Art Unit	2871
Examiner Name	H. Ngo
Attorney Docket Number	0756-7221

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Amendment / Reply
  - ☒ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Assignment Papers *(for an Application)*
- ☐ Drawing(s)
- ☐ Declaration and Power of Attorney
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
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- ☐ After Allowance Communication to Group
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- ☐ Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
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- ☐ Status Letter
- ☐ Other Enclosures
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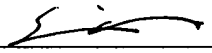
Remarks

☒ The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 50-2280 for the above identified docket number.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Eric J. Robinson, Reg. No. 38,285 Robinson Intellectual Property Law Office, P.C. PMB 955 21010 Southbank Street Potomac Falls, VA 20165
Signature	
Date	June 1, 2005

CERTIFICATE OF MAILING

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Type or printed name	Adele M Stamper		
Signature	Adele M Stamper	Date	June 1, 2005

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Attorney Docket No. 0756-7221

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	Group Art Unit: 2871
Toshimitsu KONUMA	)	Examiner: H. Ngo
Serial No. 10/728,932	)	CERTIFICATE OF MAILING
Filed: December 8, 2003	)	I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 1, 2005.
For: ELECTRO-OPTICAL DEVICE WITH LIQUID CRYSTAL	)	Adele M Stamper

AFTER FINAL RESPONSE

Honorable Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Official Action mailed June 1, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 8, 2003, and January 21, 2005.

Claims 6-16 are pending in the present application, of which claims 6 and 12 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 6-9 and 12-15 under the doctrine of obviousness-type double patenting over claims 13, 14 and 16 of U.S. Patent No. 6,693,696 to Konuma. The Applicant respectfully requests that the double patenting rejections be held in abeyance until an indication of allowable subject matter is made in the present application. At such time, the Applicant will respond to any remaining double patenting rejections.

The Official Action rejects claims 6-16 as obvious based on the combination of U.S. Patent No. 5,250,214 to Kanemoto et al., U.S. Patent No. 4,983,023 to Nakagawa et al. and U.S. Patent No. 4,634,226 to Isogai et al. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Kanemoto, Nakagawa and Isogai or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and

asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

The Official Action concedes that Kanemoto and Nakagawa do not teach a "pair of orientation films having antiparallel orientation directions to each other" (page 5, Paper No. 20050224). The Official Action relies on Isogai to allegedly teach "forming a LCD comprising a pair of orientation films having antiparallel orientation directions to each other" (Id.). The Official Action asserts that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the display device of Kanemoto et al. in view of Nakagawa et al. with a pair of orientation films having antiparallel orientation directions to each other for obtaining a uniform alignment of liquid crystal molecules, and having display device with good response characteristic" (Id.). The Applicants respectfully disagree and traverse the above assertions in the Official Action.

The feature of Isogai of "obtaining a uniform alignment of liquid crystal molecules," appears to be attributed to using organic films of polyimide type (see column 10, line 63, to column 11, line 2). However, Isogai does not teach or suggest that the feature of "obtaining a uniform alignment of liquid crystal molecules" is due to use of anti-parallel rubbing directions as assertion in the Official Action.

The Applicant respectfully submits that the Official Action has not provided a sufficient basis to show that one of skill in the art would have been motivated to combine or modify the reference teachings to achieve the present invention. While the Official Action appears to have noted a general advantage from Isogai, i.e. the general disclosure of an optical apparatus with a good response characteristic, and the feature of anti-parallel rubbing, the Official Action has failed to show a nexus between this advantage, i.e. a good display quality, and the anti-parallel rubbing. The uniform alignment appears to be achieved by the use of polyimide films, and not as a result of the anti-parallel rubbing. Therefore, there is an insufficient showing that one of skill in the art would have been motivated to modify the combination of Kanemoto and Nakagawa to include anti-parallel rubbing since Isogai fails to disclose or suggest any advantage that would be achieved from the use of anti-parallel rubbing or that such anti-parallel rubbing should be combined with the combined device of Kanemoto and Nakagawa.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness.

Furthermore, the prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. The independent claims recite "spacing between said substrates is less than 3.5 μm." The Official Action concedes that "Kanemoto et al. and conventional art fail to disclose a display device having spacing between the substrates being less than 3.5 μm" (page 4, Paper No. 20050224). The Official Action asserts that "Nakagawa et al. teach (col. 3 lines 55-60) forming a display device having spacing between the pair of substrates being less than 3.5 μm for

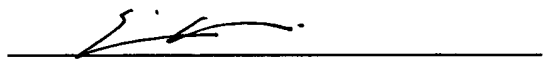
obtaining high quality display" (page 5, Id.). The Applicants respectfully disagree and traverse the above-referenced assertion in the Official Action.

In Nakagawa, "[o]ne part by weight of silicon dioxide particles having an average diameter of 2.2 microns and a standard deviation of diameter of 0.15 microns and 5 parts by weight of polymer particles available from Tosoh Corporation as Toyo Spacer (average diameter = 3.5 microns, standard deviation of diameter = 0.2 micron, epoxy content = 29%) were mixed and 20 mg of the mixture was put in a clean chamber of 100 liter to form aerosol" (see column 3, lines 50-60, emphasis added). As such, Nakagawa teaches that at least a few spacers have a diameter more than 3.5 μm. Specifically, it appears that a spacer diameter of 3.3 to 3.7 μm is within the standard deviation. Therefore, Nakagawa does not teach or suggest that spacing between substrates is less than 3.5 μm.

Isogai does not cure the above-referenced deficiencies in Kanemoto and Nakagawa. Isogai is relied upon to allegedly teach antiparallel orientation (page 5, Paper No. 20050224). However, Kanemoto, Nakagawa and Isogai, either alone or in combination, do not teach or suggest that spacing between substrates is less than 3.5 μm. Since Kanemoto, Nakagawa and Isogai do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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